

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

SAPREX, LLC,

Plaintiff,

vs.

LINCOLN INDUSTRIES, INC.,

Defendant.

8:20-CV-338

MEMORANDUM AND ORDER

I. INTRODUCTION

This matter comes before the Court for the construction of patent claim terms in accordance with *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996). After consideration of the briefing, evidence, and arguments, the Court construes the disputed terms as set forth herein.

II. BACKGROUND

Plaintiff, Saprex, LLC (“Saprex”), seeks injunctive relief and damages against Defendant, Lincoln Industries, Inc. (“Lincoln Industries”), for alleged infringement of Saprex’s patent for a pipe-insulation system. [Filing 1](#). Lincoln Industries, in turn, has a filed counterclaim seeking declarations of non-infringement and invalidity and alleging inequitable conduct on Saprex’s behalf. [Filing 52](#).

The patent in suit is U.S. Patent No. 10,591,104 (“the ’104 Patent”). [Filing 1-1](#). It was issued by the U.S. Patent and Trademark Office on March 17, 2020, and is presently assigned to Saprex. [Filing 1-1 at 1](#). The abstract of the ’104 Patent describes a “breathable, multi-layer exhaust insulation system” which includes “a multi-layer sleeve.” [Filing 1-1 at 1](#). The invention “may be

used, among other things, to fit exhaust systems on vehicles generally and large trucks in particular.” [Filing 1-1 at 10](#).

The claims relevant to the dispute are as follows:

1. A breathable, multi-component exhaust insulation sleeve for an exhaust pipe, said insulation sleeve comprising:

an inner layer comprising a first fabric made from a first high-temperature resistant material forming a sleeve, wherein said sleeve is configured to be positioned adjacent to and disposed about an outer surface of a section of the exhaust pipe; and

an outer cover layer comprising heat cured polymeric resin and a second fabric including yarns comprising glass fibers, wherein the outer layer is positioned adjacent to and disposed over the inner layer, wherein the yarns are fused together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer.

2. The insulation sleeve set forth in claim 1, wherein said inner layer is made from material selected from the group consisting of e-glass, s-glass, silica, basalt and ceramic.

. . . .

5. The insulation sleeve set forth in claim 1, further including at least one middle layer disposed between said inner layer and said outer layer.

[Filing 1-1 at 12](#).

The parties filed their joint claim-construction chart and prehearing statement on June 8, 2021. [Filing 56](#). They identified five disputed claim terms: “breathable” (from claim 1); “sleeve” (from claims 1, 2, and 5); “fabric” (from claim 1); “heat cured polymeric resin” (from claim 1); and “yarns comprising glass fibers . . . wherein the yarns are fused together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer” (from claim 1). [Filing 56 at 2-3](#). Both parties submitted briefing and supporting evidence. [Filing 57](#); [Filing 58](#); [Filing 59](#); [Filing 60](#); [Filing 61](#); [Filing 62](#).

The Court held a *Markman* hearing on September 13, 2021. Filing 63. The parties appeared and presented evidence and oral argument. [Filing 64](#). The Court took the matter under advisement.

III. ANALYSIS

A. Standard of Review

“[C]laim construction falls ‘exclusively within the province of the court,’ not that of the jury.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 325, 135 S. Ct. 831, 837, 190 L. Ed. 2d 719 (2015) (quoting *Markman*, 517 U.S. at 372, 116 S. Ct. at 1384). A claim construction order will “dictate[] how the court will instruct the jury regarding a claim’s scope.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1359 (Fed. Cir. 2008). In construing a claim term, the Court must give, to the extent possible, each term its “ordinary and customary meaning, as [it] would be understood by one of ordinary skill in the art in question at the time of the invention.” *Intervet Inc. v. Merial Ltd.*, 617 F.3d 1282, 1287 (Fed. Cir. 2010) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005)).

Thus, it is proper for courts to “treat the ultimate question of the proper construction of the patent as a question of law in the way that [courts] treat document construction as a question of law.” *Teva Pharm. USA, Inc.*, 574 U.S. at 325, 331, 135 S. Ct. at 837, 841, 190 L. Ed. 2d 719 (2015) (noting that when the court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court’s construction is a determination of law, however, underlying factual determinations are reviewed for clear error).

B. Construction of Disputed Claim Terms

The parties dispute the correct construction of the five claim terms set forth above.¹ Having reviewed the patent specification and claims, the patent-prosecution history, the parties' extrinsic evidence, the pertinent case law, and the parties' arguments, the Court construes the disputed terms as follows.

The purpose of claim construction is to “determin[e] the meaning and scope of the patent claims asserted to be infringed.” *Markman*, 52 F.3d at 976. “It is, of course, ‘a bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Medegen MMS, Inc. v. ICU Medical, Inc.*, 317 F. App’x 982, 986 (Fed. Cir. 2008) (citing *Phillips*, 415 F.3d at 1312). The process of construing a claim term begins with the words of the claims. *Phillips*, 415 F.3d at 1312–14; *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). “[A]bsent contravening evidence from the specification or prosecution history, plain and unambiguous claim language controls the construction analysis.” *DSW, Inc. v. Shoe Pavilion, Inc.*, 537 F.3d 1342, 1347 (Fed. Cir. 2008). However, the claims “must be read in view of the specification, of which they are a part.” *Phillips*, 415 F.3d at 1315 (quoting *Markman*, 52 F.3d at 979); see *Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d 973, 977 (Fed. Cir. 2014) (stating in claim construction, the court “gives primacy to the language of the claims, followed by the specification”). Furthermore, because “the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.” *Phillips*, 415 F.3d at 1323.

¹ The parties purport to agree that the terms should be afforded their plain and ordinary meanings. See [Filing 57 at 2](#) (“Plaintiff Saprex . . . does not believe that any of these terms need to be construed any further because they are, quite noticeably, familiar terms from the English language”); [Filing 60 at 2](#) (“Lincoln Industries proposes the ordinary meaning based on a careful review of the patent claims”). However, they then go on to dispute what those plain and ordinary meanings are. Thus, the Court is required to construe these terms in order to resolve the parties’ dispute. See *O2 Micro Int’l Ltd*, 521 F.3d at 1361 (“A determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate when . . . reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.”).

If a claim term remains ambiguous after an examination of intrinsic evidence, the court “may look to extrinsic evidence to help resolve the lack of clarity.” *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001). Extrinsic evidence includes expert and inventor testimony, dictionaries, and learned treatises. *Phillips*, 415 F.3d at 1317. Extrinsic evidence is less reliable and less persuasive than intrinsic evidence since such evidence is not part of the patent and was not created concurrently with the prosecution of the patent. *Id.* at 1317-19; *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1290 (Fed. Cir. 2015) (“Although courts are permitted to consider extrinsic evidence, like expert testimony, dictionaries, and treatises, such evidence is generally of less significance than the intrinsic record.”). “Extrinsic evidence may not be used ‘to contradict claim meaning that is unambiguous in light of the intrinsic evidence.’” *Summit 6, LLC*, 802 F.3d at 1290 (quoting *Phillips*, 415 F.3d at 1324). With these principles in mind, the Court examines the disputed claim terms.

1. Breathable

Claim 1 describes “[a] *breathable*, multi-component exhaust insulation sleeve for an exhaust pipe, said insulation sleeve comprising” an inner and outer layer. Filing 1-1 at 12 (emphasis added). Saprex first argues the Court should not construe the term “breathable” because it appears in the preamble of claim 1 and is thus not a claim term. Filing 57 at 7. Alternatively, Saprex argues this term should be given its plain and ordinary meaning which it contends should be “allows for the passage of gas.” Filing 57 at 7-8. Lincoln Industries, in turn, argues the preamble must be construed because it is limiting and proposes a construction of “[a]llowing air to pass through; porous.” Filing 60 at 7-11. The Court concludes this term requires no construction because it is a non-limiting term contained in the preamble to claim 1.

The preamble is “that part of [the] claim preceding the transitional term ‘comprising.’” *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002) “Generally, the preamble does not limit the claims.” *Id.* (citing *DeGeorge v. Bernier*, 768 F.2d 1318, 1322 n.3, 226 USPQ 758, 764 n.3 (Fed. Cir. 1985)). “However, the preamble may be limiting ‘when the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention.’” *Id.* (quoting *Bell Commc’ns Research, Inc. v. Vitalink Commc’ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995)). “Whether to treat a preamble as a limitation is a determination ‘resolved only on review of the entire[] . . . patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.’” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (alterations in original) (quoting *Corning Glass Works v. Sumitomo Electric U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989)). “If the preamble is ‘necessary to give life, meaning and vitality’ to the claim, then the claim preamble should be construed as limiting.” *Allen Eng’g Corp.*, 299 F.3d at 1346 (quoting *Kropa v. Robie*, 187 F.2d 150, 152 (C.C.P.A. 1951)).

Lincoln Industries argues that the term “breathable” from the preamble of claim 1 should be interpreted as a claim limitation and must therefore be construed by the Court. [Filing 60 at 7-9](#). It points to the frequency the term is used in the patent specification and the fact it believes “breathability” is what distinguishes the ’104 patent and Saprex’s related prior patents from other inventions as reasons why the Court must construe the term. [Filing 60 at 7-10](#). Saprex responds that the frequency of specification terms and arguments regarding the distinguishability of the patent are not determinative of whether a preamble is limiting. [Filing 61 at 3-5](#). Read in light of the patent as a whole, the Court agrees with Saprex.

The Court concludes “breathable” as contained in the preamble to claim 1 is merely extolling a benefit of the claimed invention; it is not limiting or “defining the subject matter of the claimed invention.” *Allen Eng’g Corp.*, 299 F.3d at 1346 (quoting *Bell Commc’ns Research*, 55 F.3d at 620). Likewise, the discussion of “breathability” in the patent prosecution history and related patents was for purposes of describing the inventions in question, not for limiting or defining them. *See, e.g.*, Filing 59-3 at 270 (“The claimed invention [in the related ’687 patent] provides the *functional benefit of a breathable* fused multi-component exhaust insulation system.” (emphasis added)). Furthermore, the preamble including the term “breathable” is not “‘necessary to give life, meaning and vitality’ to the claim.” *Id.* at 1346 (quoting *Kropa*, 187 F.2d 150, 152). Rather, the claim body adequately describes the invention and does not rely on the preamble for any essential structure or steps. *Accord Allen Eng’g Corp.*, 299 F.3d at 1346 (declining to construe “a ‘laudatory term’ that only sets forth the purpose of the claimed invention” in the preamble); *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (“[A] preamble is not limiting ‘where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.’” (quoting *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997))).

At the *Markman* hearing, Lincoln Industries directed the Court to *Alloc, Inc. v. International Trade Commission*, 342 F.3d 1361 (Fed. Cir. 2003), in support of its contention that the Court must construe the term “breathable” as it proposed. However, *Alloc* does not support Lincoln Industries’ contention that the term “breathable” in the preamble must be construed in the first place. In that case, the United States Court of Appeals for the Federal Circuit concluded that “the specification or the prosecution history of a patent may alter the meaning of a *claim term* from its conventional usage.” *Id.* at 1368 (emphasis added). It thus proceeded to construe the claim term

in question narrowly based on the specification as a whole. *Id.* at 1370. However, that term was not contained in the preamble to the claim and thus there was no threshold discussion over whether it should be construed to begin with; rather the question was the proper construction of the term in light of the specification. *Alloc* is thus unhelpful to Lincoln Industries' argument that the Court must construe the preamble term "breathable." The Court declines to construe "breathable" as contained in the preamble of claim 1.

2. *Sleeve*

The term "sleeve" appears in claims 1, 2, and 5 as follows:

3. A breathable, multi-component exhaust insulation *sleeve* for an exhaust pipe, said insulation sleeve comprising:

an inner layer comprising a first fabric made from a first high-temperature resistant material forming a *sleeve*, wherein said *sleeve* is configured to be positioned adjacent to and disposed about an outer surface of a section of the exhaust pipe; and

an outer cover layer comprising heat cured polymeric resin and a second fabric including yarns comprising glass fibers, wherein the outer layer is positioned adjacent to and disposed over the inner layer, wherein the yarns are fused together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer.

4. The insulation *sleeve* set forth in claim 1, wherein said inner layer is made from material selected from the group consisting of e-glass, s-glass, silica, basalt and ceramic.

. . . .

5. The insulation *sleeve* set forth in claim 1, further including at least one middle layer disposed between said inner layer and said outer layer.

[Filing 1-1 at 12](#) (emphasis added). Saprex argues the term "sleeve" should be given its plain and ordinary meaning, which it argues is "a part designed to fit closely over another part." [Filing 57 at 9](#). Lincoln Industries proposes the Court construe this term to mean "a tubular part designed to fit over another part." [Filing 60 at 11](#). It argues the '104 patent specification uses the term "tube" and

“sleeve” interchangeably and thus the term “sleeve” must be limited to a tubular shape only. The Court concludes the term “sleeve” should be construed as “a part designed to fit closely over another part,” and should not be limited to a tubular shape.

Lincoln Industries cites various portions of the patent specification that reference a tubular shape. [Filing 60 at 11](#). However, each of these references to a tubular shape is a preferred embodiment of the invention rather than a claim limitation. For example, in the “Brief Summary of the Invention” section, the patent states:

In one preferred embodiment of the present invention, the insulating sleeve includes a first layer of a braided silica sleeve adjacent the exhaust system pipes, then two layers of braided e-glass for insulation, and an outer layer of a PPS/glass cover treated with a fluorocarbon sewn into a tubular sleeve using a glass/stainless steel sewing thread and a safety lock stitch.

[Filing 1-1 at 11](#). Thus, while Lincoln Industries is correct that the specification references a tubular sleeve in places, it is clear that such references are mere preferred embodiments, not restrictions on the claims themselves. “[I]t is axiomatic that without more the court will not limit claim terms to a preferred embodiment described in the specification.” *SanDisk Corp. v. Memorex Prod., Inc.*, 415 F.3d 1278, 1286 (Fed. Cir. 2005) (citing *Laitram Corp. v. Cambridge Wire Cloth Co.*, 863 F.2d 855, 865 (Fed. Cir. 1988)). Construing the term “sleeve” to mean “tubular sleeve” would improperly limit that claim term. Accordingly, the Court construes “sleeve” to mean “a part designed to fit closely over another part.”

3. *Fabric*

Claim 1 discloses, in part, “a first *fabric* made from a first high-temperature resistant material forming a sleeve” and “a second *fabric* including yarns comprising glass fibers.” [Filing 1-1 at 12](#) (emphasis added). Saprex proposes that “fabric” should be given its plain and ordinary meaning, which it argues should be “material made from fibers.” [Filing 57 at 12](#). Lincoln Industries

initially contended the Court should construe “fabric” to mean “[b]raided, knit or woven material.” [Filing 56 at 2](#). However, in briefing, Lincoln Industries “agree[d] with Saprex that the term fabric ‘needs no construction’ from this Court and should be given its ordinary meaning.” [Filing 60 at 12](#). Lincoln Industries then disputed, however, that “material made from fibers” was a proper ordinary meaning for the term “fabric.” [Filing 60 at 13](#). Lincoln Industries proposed no alternative construction. [Filing 60 at 13](#). Because the parties purport to agree that the term should be given its plain and ordinary meaning but disagree on what that meaning is, the Court must still construe this term. *See O2 Micro Int’l Ltd.*, 521 F.3d at 1361 (construction required in order to resolve parties’ dispute). It concludes the term “fabric” should be construed as Saprex proposes to mean “material made from fibers.”

The ’104 patent does not disclose a specific type of fabric or method for constructing the fabric. *See generally* [Filing 1-1](#). Because the patent itself does not fully resolve the proper construction of the term “fabric,” the Court looks to the extrinsic evidence submitted by the parties. Saprex submitted a declaration from Dr. Donald B. Thompson. [Filing 59-5](#). Dr. Thompson has a Ph.D. in fiber and polymer science and has worked in the field of textile engineering and chemistry as a scientist and professor for the last forty-four years. [Filing 59-5 at 2](#). He avers that a person of ordinary skill in the art would understand fabric to mean “material made from fibers” because that is its plain and ordinary meaning and the ’104 patent specification “does not offer a specific definition of ‘fabric’ that would counsel against the plain and ordinary meaning.” [Filing 59-5 at 8](#). This construction is further supported by the various dictionary definitions Saprex presents which make it clear that a fabric can be made by a variety of methods. *See, e.g.*, [Filing 62-3](#) (*The New Shorter Oxford English Dictionary* defining “fabric” as “[a] manufactured textile, (a) woven, knitted, or felted material; a similar material made of chemically bonded fibres (also non-woven

fabric))). Thus, there is no reason to limit the definition of “fabric” to certain methods of creating fabric like braiding, knitting, or weaving as Lincoln Industries initially contended. Rather a fabric is defined by being made of fibers or other similar materials like yarn and created in *any* manner, whether by knitting, weaving, felting, or otherwise. Accordingly, the Court construes the term “fabric” to mean “material made from fibers.”

4. *Heat Cured Polymeric Resin*²

Claim 1 describes, in part, “an outer layer comprising *heat cured polymeric resin*.” [Filing 1-1 at 12](#) (emphasis added). Saprex argues this term should be given its plain and ordinary meaning which it contends is “heat cured resin that comprises a polymer.” [Filing 57 at 14](#). Lincoln Industries proposes a construction of “heat cured thermoplastic resin.” [Filing 60 at 13](#). The Court concludes “heat cured polymeric resin” means “heat cured resin that comprises a polymer”.

The parties agree that “heat cured” and “resin” need no construction and thus their dispute centers on the meaning to be given “polymeric.” Lincoln Industries contends “polymeric” resins must be limited to “thermoplastic” resins because “the specification of [the] ’104 patent consistently teaches the use of thermoplastic resins, and only thermoplastic resins.” [Filing 60 at 13](#). While Lincoln Industries is correct that the patent discloses thermoplastic resin as a preferred embodiment, there is no indication in the patent that it is limited only to thermoplastics. *See, e.g.*,

² In the joint opening claim construction brief, Lincoln Industries argued, “This claim element is not disclosed or supported by the specification.” [Filing 56 at 2](#). It argued it does not inform one skilled in the art of the scope of the invention, does not enable one skilled in the art to make or use the invention, and does not convey with reasonable clarity that Saprex was in possession of the invention as now claimed. [Filing 56 at 2](#). Saprex objected to Lincoln Industries’ arguments in this regard, contending they are either allegations of invalidity which are improper at the claim-construction stage or they are arguments of indefiniteness which Lincoln Industries failed to disclose. [Filing 56 at 2](#) n.1. However, Lincoln Industries did not advance this argument in its briefing, *see* [Filing 60](#), and at the *Markman* hearing conceded any such argument was for a later date. Lincoln Industries also initially advanced and then conceded a similar argument as to the fifth claim term, “yarns comprising glass fibers . . . wherein the yarns are fused together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer.” The Court agrees any arguments regarding invalidity or indefiniteness are an improper consideration at this stage of the proceedings.

[Filing 1-1 at 11](#) (claim specification stating “[t]he warp *can be made* from resin type fibers” and listing thermoplastic fibers as examples (emphasis added)); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (“[C]laims may embrace ‘different subject matter than is illustrated in the specific embodiments in the specification’” (quoting *Nazomi Commc’ns, Inc. v. ARM Holdings, PLC*, 403 F.3d 1364, 1369 (Fed. Cir. 2005))). Furthermore, the specification discloses a variety of different resin types, at least one of which may be a thermoset rather than thermoplastic resin. See [Filing 1-1 at 11](#) (patent specification stating the “wrap can be made from resin type fibers including “Poly(p-phenylene sulfide) PPS (sold under the trade name Ryton)” among others); [Filing 60-7 at 6](#) (Dr. Thompson testifying, “It is generally processed as a thermoplastic, but as I have mentioned previously Ryton or PPS does cross-link at high temperatures. So for an extended curing process it would be a thermoset as well.”).

Lincoln Industries also points to various aspects of the patent-prosecution history of the ’104 patent and its related patents in support of its argument that “polymeric” should be limited to thermoplastic resin. In particular, Lincoln Industries states that in response to the patent examiner’s initial rejection of its proposed claims, Saprex broadened the “outer cover layer” in claim 1 to be “a heat cured polymeric resin” rather than “heat cured thermoplastic resin-based fibers.” [Filing 60 at 16](#) (citing [Filing 58-1](#) at 301). Lincoln Industries argues Saprex left the substance of the invention as it was (i.e., disclosing only a thermoplastic resin) despite the change in terminology and thus “polymeric” is actually limited to “thermoplastic.” [Filing 60 at 16](#). It also points to a statement by the examiner equating thermoplastic resin with polymeric resin. [Filing 60 at 17](#) (citing [Filing 58-2](#) at 65 (examiner stating, “However, a thermoplastic is defined as a plastic polymer material wherein a polymeric resin is synonymous with a thermoplastic resin”))). Neither of these arguments relating to the patent-prosecution history is clear evidence that Saprex itself

intended to limit polymeric resin to thermoplastic resin. See *Cont'l Cirs. LLC v. Intel Corp.*, 915 F.3d 788, 798 (Fed. Cir.), *cert. denied*, 140 S. Ct. 648, 205 L. Ed. 2d 390 (2019) (“[T]o operate as a disclaimer, the statement in the prosecution history must be clear and unambiguous, and constitute a clear disavowal of scope.” (quoting *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1306 (Fed. Cir. 2007))); *Sorensen v. Int’l Trade Comm’n*, 427 F.3d 1375, 1379 (Fed. Cir. 2005) (“[I]t is the applicant, not the examiner, who must give up or disclaim subject matter that would otherwise fall within the scope of the claims.” (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1124 (Fed. Cir. 2004))).

Saprex argues a further reason not to construe polymeric resin as limited to thermoplastic resin is the doctrine of claim differentiation. [Filing 57 at 14-15](#). Under the doctrine of claim differentiation, “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Phillips*, 415 F.3d at 1315 (citing *Liebel–Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004)).

Here, claim 1 is an independent claim. Claims 3 and 4 depend from claim 1 as follows:

3. The insulation sleeve set forth in claim 1, wherein said outer cover layer is made from a core spun yarn having a glass filament core and a thermoplastic fiber wrapped around said glass filament core.
4. The insulation sleeve set forth in claim 3, wherein said thermoplastic fiber is selected from the group consisting of Poly(p-phenylene sulfide), Polyetherimide, Polyether ether ketone, Polysulfone, Polyphthalamide, nylon, polyester, and polypropylene.

[Filing 1-1 at 12](#).

Lincoln Industries argues the thermoplastic fibers in claims 3 and 4 refer to the yarn of claim 1, not the resin, and therefore the doctrine of claim differentiation is inapplicable when discussing the polymeric resin of claim 1. [Filing 60 at 18](#). However, in so doing, Lincoln Industries apparently agrees that the reference to “thermoplastic” in claims 3 and 4 should not be construed

to limit the term “polymeric resin” in claim 1, whether because of claim differentiation as Saprex argues or because the terms refer to different structures as Lincoln Industries contends. The Court has not been asked to construe claim 3 or claim 4 and thus need not opine on whether claims 3 and 4 refer to the yarn or resin of claim 1. However, to the extent claims 3 and 4 refer to the polymeric resin of claim 1, it agrees the doctrine of claim differentiation would support that the polymeric resin in claim 1 should not be limited to thermoplastic resin.

Accordingly, the Court concludes the term “heat cured polymeric resin” should be not be limited to thermoplastic resin and should be construed to mean “heat cured resin that comprises a polymer.”

5. Yarns Comprising Glass Fibers . . . Wherein the Yarns Are Fused Together, Wherein the Fused Yarns Dimensionally Stabilize and Stiffen the Outer Cover Layer Around the Inner Layer

Claim 1 describes, in pertinent part, the following:

[A]n outer cover layer comprising heat cured polymeric resin and a second fabric including *yarns comprising glass fibers*, wherein the outer layer is positioned adjacent to and disposed over the inner layer, *wherein the yarns are fused together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer.*

[Filing 1-1 at 12](#) (emphasis added). Saprex argues this term should be afforded its plain and ordinary meaning. With respect to “yarns comprising glass fibers,” Saprex contends the plain and ordinary meaning is “yarns including glass fibers.” [Filing 56 at 3](#). With respect to “yarns are fused together,” Saprex contends the plain and ordinary meaning is “yarns are physically joined or connected together.” [Filing 56 at 3](#). Lincoln Industries proposes this term be construed to mean “yarns made of glass fibers wherein the glass fibers are joined by melting together, wherein the joined together glass yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer.” [Filing](#)

[56 at 3](#). Thus, the parties dispute only the phrases “comprising glass fibers” and “fused” in the above claim term.

a. “Yarns Comprising Glass Fibers”

In its brief, Lincoln Industries initially agreed that its definition of “yarns comprising glass fibers” (“yarns made of glass fibers”) is the same as Saprex’s proposed construction of “yarns including glass fibers” in that both agree glass fibers must be included in the yarn and that the yarn can include other fibers as well. [Filing 60 at 19](#). However, it then went on to argue that “comprising glass fibers” should be construed to *exclude* resin-based fibers. [Filing 60 at 19-20](#). It points to a prior patent, the ’687 patent, in which Saprex claimed an outer cover layer with “yarns comprising glass fibers and heat cured thermoplastic resin-based fibers.” [Filing 60 at 19](#) (quoting [Filing 60-2 at 12](#) (’687 patent)). It argues because the ’104 patent did not also include the express phrase “and heat cured thermoplastic resin-based fibers” like the ’687 patent did, the Court must construe “yarns made of glass fibers” to be limited to non-resin fibers. [Filing 60 at 19-20](#).

This argument is not supported by the ’104 patent itself or case law. *See Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008) (“A patentee may act as its own lexicographer and assign to a term a unique definition that is different from its ordinary and customary meaning; however, a patentee must *clearly express* that intent in the written description.” (emphasis added) (citing *Phillips*, 415 F.3d at 1313)); *Ancora Techs., Inc. v. Apple, Inc.*, 744 F.3d 732, 738 (Fed. Cir. 2014) (“[A] clear ordinary meaning is not properly overcome (and a relevant reader would not reasonably think it overcome) by a few passing references that do not amount to a redefinition or disclaimer.”). The fact Saprex included resin-based fibers in a prior related patent does not mean that resin-based fibers must be excluded from the ’104 patent. Rather, the “plain and unambiguous claim language,” *DSW, Inc.*, 537 F.3d at 1347, of the ’104

patent must govern and is clear that the yarns must include glass fibers and need not exclude any other type of fibers. There is no express disclaimer in the written description of the '104 patent which would support excluding resin-based fibers from the yarns. Accordingly, the Court construes “yarns comprising glass fibers” to mean “yarns including glass fibers.”

b. “Fused Together”

The parties dispute whether the claim term “fused together” requires melting or can be accomplished by other means. Lincoln Industries’ proposal to limit this phrase to “melting” finds no support in the claim language or the specification. *See* [Filing 1-1](#). It argues that “fused together” should be limited to “melting” based on Saprex’s claims in a different pending continuation application. [Filing 60 at 21-22](#). In that application, Saprex seeks to claim an outer cover layer “wherein the yarns . . . are fused together *by the heat cured polymeric resin.*” [Filing 60-4 at 11](#). It argues that the '104 patent can therefore only refer to the glass fibers in the yarn melting together to stabilize the outer cover layer rather than any resin hardening together around the glass fibers to stabilize the outer cover layer. [Filing 60 at 21](#). This claim is without merit. As set forth above, a disclaimer of claim scope must be express and unambiguous. *Cont’l Cirs. LLC*, 915 F.3d at 798. Saprex’s claims in a separate patent application are not the type of express and clear language that might limit the terms of the '104 patent itself.

That “fused together” is inclusive of but not limited to melting is also supported by the extrinsic evidence. *See, e.g.,* [Filing 59-10 at 4](#) (*American Heritage Dictionary* defining “fuse” as “[t]o join (different pieces or elements) together physically, *esp. by* melting or heating (emphasis added)); [Filing 59-9 at 2](#) (*Merriam Webster Dictionary* defining “fuse” as “to become blended or joined by *or as if by* melting together” (emphasis added)). Accordingly, the Court concludes “fused together” is not limited to melting. The claim term “yarns comprising glass fibers . . . wherein the

yarns are fused together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer” is construed to mean “yarns including glass fibers . . . wherein the yarns are physically joined or connected together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer.”

IV. CONCLUSION

The Court concludes that it need not construe the preamble term “breathable.” It construes the remaining disputed claim terms as set forth in greater detail in this Order. Accordingly,

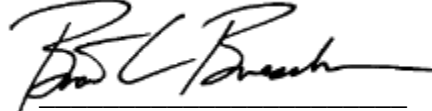
IT IS ORDERED:

1. The Court adopts the following constructions of the disputed claim terms in the ‘104 Patent:
 - a. The court declines to construe the term “breathable” because it is a non-limiting term contained in the preamble to claim 1;
 - b. “Sleeve” is construed as “a part designed to fit closely over another part”;
 - c. “Fabric” is construed as “material made from fibers”;
 - d. “Heat cured polymeric resin” is construed as “heat cured resin that comprises a polymer”;
 - e. “yarns comprising glass fibers . . . wherein the yarns are fused together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer” is construed as “yarns including glass fibers . . . wherein the yarns are physically joined or connected together, wherein the fused yarns dimensionally stabilize and stiffen the outer cover layer around the inner layer”; and

2. In accordance with the Court's prior scheduling Order, [Filing 39 at 2](#), within fourteen (14) days of the date of this Order, the parties shall contact Magistrate Judge Bazis's chambers to schedule a status conference to discuss case progression.

Dated this 22nd day of October, 2021.

BY THE COURT:

A handwritten signature in black ink, appearing to read "B. C. Buescher", written over a horizontal line.

Brian C. Buescher
United States District Judge